

## WHAT IS CLAIMED IS:

1. A method for preventing or treating the carriage of *Salmonella* strains that cause human salmonellosis in a food production animal comprising administering an effective amount of one or more strains of probiotic bacteria,  
5 wherein the probiotic bacteria inhibits the growth of the *Salmonella* strains that cause human salmonellosis.
2. The method of claim 1 wherein the *Salmonella* strain is the *Salmonella enterica* serovar Typhimurium DT104 or Newport.
3. The method of claim 1 wherein the probiotic bacteria strain is  
10 selected from the group consisting of isolate 31-6, 47-10, 50-10, 58-9, 59-9 small, 59-9 big, 71-8 and 76-9.
4. The method of claim 1 wherein the probiotic bacteria strain is selected from the group consisting of isolate 31-6, 76-9 and 58-9.
5. The method of claim 1 wherein the food production animal is a  
15 ruminant animal.
6. The method of claim 5 wherein the ruminant animal is a beef cow or a dairy cow.
7. The method of claim 1 wherein the food production animal is a chicken or turkey.  
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8. The method of claim 1 wherein the probiotic bacteria is administered to the animal by applying the bacteria to an animal's feed or water.
9. The method of claim 1 wherein the probiotic bacteria is administered to the animal as an innoculant paste.
10. A composition for preventing or treating the carriage of  
25 *Salmonella* strains that cause human salmonellosis in a food production animal comprising probiotic bacteria that inhibits the growth of the *Salmonella* strains, a carrier and an animal's feed or water.

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11. The composition of claim 10 wherein the probiotic bacteria is selected from the group consisting of isolates 31-6, 47-10, 50-10, 58-9, 59-9 small, 59-9 big, 71-8 and 76-9.

12. The composition of claim 10 wherein the probiotic bacteria is  
5 selected from the group consisting of isolates 31-6, 76-9, and 58-9.

13. The composition of claim 10 wherein the feed is liquid or solid feed.